Small Business Innovation Research/Small Business Tech Transfer

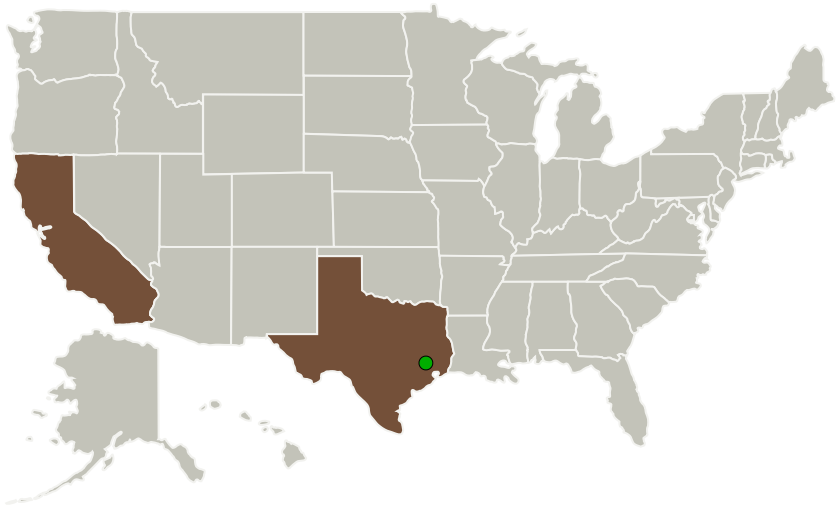
Novel Instrumentation for Lunar Regolith Oxygen Production Facilities, Phase I

Completed Technology Project (2010 - 2010)

Project Introduction

The objective of the Phase I is to develop, demonstrate and test novel instrumentation based on ultrasensitive laser absorption spectroscopy for sensitive real-time measurements of several important parameters for monitoring and control of oxygen production facilities and for analyses of lunar surface resources. The instrumentation will provide measurements of multiple trace gases and impurities on the lunar surface with a speed, accuracy and sensitivity not possible with current instrumentation.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Los Gatos Research	Lead Organization	Industry	Mountain View, California
Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations	
California	Texas

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Project Transitions

January 2010: Project Start

July 2010: Closed out

Closeout Summary: Novel Instrumentation for Lunar Regolith Oxygen Producti on Facilities, Phase I Project Image

Closeout Documentation:

- Final Summary Chart Image*(https://techport.nasa.gov/file/140089)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Los Gatos Research

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Douglas S Baer

Co-Investigator:

Douglas Baer

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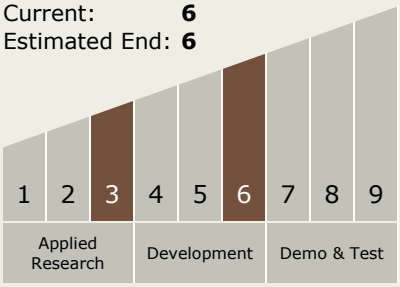
Technology Maturity (TRL)

Start: **3**
Current: **6**
Estimated End: **6**



Technology Areas

Primary:

- TX07 Exploration Destination Systems
  - TX07.1 In-Situ Resource Utilization
    - TX07.1.1 Destination Reconnaissance and Resource Assessment

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System